Improving Close Contact Fires:

Dedicated Batteries Linked to Parallel Clearance of Fires

By Lieutenant Colonel Mark R. Mueller

During the past few years, the fire support community has looked for ways to get fires back into the close fight. We developed essential fire support tasks (EFSTs), created the Striker concept and developed innumerable tactics, techniques and procedures (TTPs) for improving our plans. Yet, still, there seems to be a lag between maneuver expectations and the fire support system's ability to deliver.

Clearly, we have worked hard and done well to improve our ability to focus our fires on close support. We have improved our ability to attack "targets or objectives that are sufficiently near the supported force."[1] Yet the perception exists that the fires needed to enable maneuver success, fires that support close contact at the task force (TF) and company commander levels, are not there.

The May 2000 final draft of *FM 6-20-40 Tactics, Techniques and Procedures for Fire Support for Brigade Operations (Heavy)* lists one of the four tasks of the direct support (DS) Field Artillery battalion as providing "responsive FS [fire support] that *protects and ensures* freedom of maneuver to forces in contact with the enemy" (emphasis added).[2] Yet, in the view of many maneuver commanders, fires fall well short of their expectations of protecting and ensuring their freedom of maneuver when in contact with one of the Combat Training Center (CTC) opposing forces (OPFORs). Accuracy, responsiveness and availability are their primary issues.

The perception is Field Artillery fires and close air support (CAS) support the brigade operation only. In one article criticizing fire support, an Infantry lieutenant colonel author said, "If a fire mission happens to aid a battalion ground movement, it is a coincidence. Maneuver commanders cannot make it happen intentionally."[3]

Why have we drifted toward close fires vice close supporting fires? The provision of close supporting (contact) fire support is tough. When a maneuver force comes into direct fire contact, the battlefield's character radically changes. This environment can be characterized as time-sensitive (fires must be fast when the race goes to the swift). There is a very small margin for error (fires must be accurate when they inherently are dangerously close). The situation is fluid and confused (fires must be flexible when clearance is difficult). And there are multiple critical demands for fires *now* (fires must be overwhelming when assets are limited).

To be decisive, fires must be fast, accurate, flexible and overwhelming. Fires, both direct and indirect, must produce complementary or reinforcing effects. This environment requires an agile combined arms response.

As a combined arms community, we must improve our ability to rapidly focus fires in support of a company-team that has just made contact. Failure to respond rapidly with fires may allow the enemy to render opportunities gained with close fires (sufficiently near the supported force) moot.

The combined arms community can use two techniques to provide "close contact" fire support and improve both the responsiveness and availability of fires. The first technique is to allocate a "dedicated" battery in support of a main effort TF in contact. The second is to use a parallel process for clearing fires while adjusting on them to the target.

The Dedicated Paladin Battery. Part of slow response hinges on a lack of clear standards for tactical decision making and rapidly accessing the fire support system to attack a target in support of a company-team in contact. Typically, unless the fires are planned as part of an essential fire support task (EFST), the brigade combat team (BCT) commander and (or) the fire support coordinator (FSCOORD) have to decide whether or not to shift from one target to attack a newly identified target. Training standards do not dictate how fast the commander or the FSCOORD must make that decision.

Clearly, if it takes any time at all, for the company-team in contact, it is too long. This is especially true if fires are needed to protect the main effort TF or company-team and preserve its freedom of maneuver so it can accomplish its task and purpose at a later time in the fight.

Another of the inherent responsibilities of the DS battalion is to provide fire support for any possible contingency. Fire support assets must be identified and marshaled for execution at the right time and place. The brigade commander must retain control over *enough* firepower to influence the battle as necessary.[4]

The question is, how much is enough? Typically the BCT commander retains control of all fire support assets, with the exception of mortars, to influence the fight. We traditionally have used EFSTs to articulate tasks and critical targets to speed the process.

But often, EFSTs do not address close contact fires. Often, despite success with close fires (those fires attacking sufficiently near the supported force), BCT fires for shaping operations is for naught because the maneuver force is engaged unexpectedly in a direct fire fight and cannot access fast, accurate, flexible and overwhelming fire support. Often, losses in the direct fire exchange are such that the BCT does not have sufficient combat power to accomplish its mission. Too often, the fire support system has not protected and ensured freedom of maneuver for forces in contact with the enemy. This does not have to be the case.

The Paladin M109A6 155-mm self-propelled howitzer provides the FSCOORD enough flexibility to place a battery in a nonstandard dedicated role to provide fast and flexible fire support to forces in contact. The FSCOORD can do this without significantly degrading the DS battalion's ability to support EFSTs.

We are ingrained with the need to mass the battalion. Formerly a DS battalion massed fires as a standard—first, to reduce the battalion's exposure to counterfire and, second, to achieve rapid effects on a target.

The M109A6 can shoot a large number of volleys and then move, reducing the threat from counterfire. While the battery fires more volleys, the Paladin platoon can move immediately after the mission or during the mission, the latter by moving individual sections while the mission is in progress.

We do lose the effect of 12 to 18 rounds landing at once. But that, too, may not be required in the close contact fight. The fires of two to four howitzers (assuming one howitzer per platoon is moving at any one time) from a dedicated battery, complementing direct fire, is possibly all that is needed to allow a company-team in contact to continue its mission while eliminating a threat. The requirement to mass is not vital for the close contact fight.

Photo Courtesy of United Defense

For the rest of the EFSTs, the fewer number of firing units available does reduce the number of targets the DS battalion can attack; however, the availability of rapid fires to preserve combat power and retain freedom of maneuver as the BCT moves to an objective is paramount.

To preserve flexibility, we modified the dedicated mission somewhat. First, the dedicated battery responds to calls-for-fire solely from a force in contact. This reduces the decision-making time at the TF level and above and provides one or two company-teams direct access to the Field Artillery delivery system. This allows the fires of the platoon or battery to be immediately responsive.

This relationship does not allow the TF to start planning fires in support of targets "sufficiently close" to the supported company-teams and the formation of additional TF EFSTs. That would drag the focus of fires for close contact to shaping fires. If there is a large divergence between the brigade EFSTs and what the main effort TF needs to support its fight, then there is a problem with either the BCT EFSTs or the TF scheme of maneuver as it fits into the BCT plan.

The modification of the dedicated mission provides the main effort TF the close contact fires needed to protect and retain freedom of maneuver while still maintaining some flexibility to support shaping fires or the attack of high-payoff targets (HPTs). At a minimum, the organization for combat still maintains enough force (two batteries) to continue to shape the close fight at the BCT commander's decisive point and attack targets "sufficiently near the supported force."

In a recent deliberate attack fire coordination exercise (FCX) conducted by the 1st Battalion, 6th Field Artillery, 1st Infantry Division (Mechanized) in the close combat tactical trainer (CCTT), one battery was placed in a dedicated role to a TF for close contact support while two batteries focused on achieving the BCT EFSTs. In practical terms, this meant each battery commander maneuvered his platoons and bounded by section to provide continuous fires as required to support EFSTs (a 30-second response time for two Paladin sections and a 75-second response time for a third Paladin section). Fire support officers (FSOs) established a direct link with one or two of the lead companies in the TF to the dedicated battery to respond to immediate requests for close contact fires.

The dedicated battery commander moved to the main effort TF command post with the mission of responding rapidly with fires for forces in contact. His objectives were to preserve the TF's combat power and retain its ability to maneuver.

Despite some growing pains in training TF FSOs in how to employ this battery, the concept proved powerful. The TF company-teams could maneuver to the decisive point with the dedicated battery firing about one-quarter to one-third of its missions as close contact fires (fires immediately responsive to a force in contact).

When the battalion fire direction officer (FDO) identified close contact targets as HPTs, he reinforced the fires of the dedicated battery. If not, then the remaining two batteries continued to focus fires on the brigade's decisive point. As part of the battalion massed in support of the BCT EFSTs, the dedicated battery fired approximately two-thirds to three-quarters of the fire missions. In an offensive scenario, most of these fires were fired as the BCT crossed the line of departure (LD) initially and when the lead TF neared the point of breech or point of penetration.

The result of using the dedicated battery was that fires were available to support a company in contact while the DS battalion accomplished the BCT commander's EFSTs. Both close contact fires and traditional close fires could be delivered simultaneously. Response time for fires in support of a company in contact was reduced by two to four critical minutes.

As the dedicated battery rapidly engaged a HPT that was influencing the brigade scheme of maneuver, the battalion FDO could complete a mission on another target and reinforce the effects of the dedicated battery by massing all three batteries on the target. In most cases, fires did not work in isolation but complemented or reinforced the effects of direct fires on the target, enhancing the effectiveness of the combined arms response.

Both the rapid decision-making and immediate access drastically reduced the time required to attack targets in support of forces in contact and allowed the TF to move rapidly in zone with greater combat power. These fires also denied the enemy the ability to reposition his covering forces back into his main battle area as they were either destroyed or blocked by the TF's rapid maneuver.

Parallel Mission Processing. If the maneuver commander cannot rapidly clear fires in zone or sector and the fires are inaccurate, then again, the company-team takes losses while it trades volleys with the enemy and (or) loses its freedom of maneuver.

The 2002 Fire Support Conference "Field Artillery Azimuths Information Paper" indicated a growing perception that it takes 28 to 42 minutes to shoot missions with clearance being the predominant factor in slowing response.[5] If an FA battalion meets the mission training plan (MTP) time of two minutes, 30 seconds to conduct a fire-for-effect (FFE) mission with dual-purpose improved conventional munitions (DPICM) (high explosive with a time fuze) during gunnery, which many battalions can do routinely, then it is taking in excess of 12 minutes to clear a mission for firing. Once cleared, an analysis of more than 180 missions from 10 rotations at the Combat Maneuver Training Center (CMTC) at Hohenfels, Germany, showed that more than 85 percent of all missions had a target location error (TLE) of greater than 250 meters and that 60 percent had a TLE of more than 300 meters.[6]

Even with the improved availability of fires to support a maneuver element in contact and increased responsiveness, the question of accuracy in close contact fires must be solved. A solution to these problems is to establish time standards for fire mission clearance and a process that supports adjust fire, not FFE, as the standard.

Fire support doctrine provides some guidance for fires clearance, such as positive clearance, centralized or decentralized control, or pre-clearance of fires. However, there is no clear combined arms standard for the battle drill to rapidly clear targets nor is there a standard for the speed with which target clearance must occur at all levels.

Fire support doctrine does advise the use of fire support coordinating measures (FSCMs) to speed response. In the close fight, the most basic of these FSCMs is a boundary.

The best way to ensure rapid clearance is by using a boundary. However, to preserve flexibility for rapid maneuver, it's rare for the commander of armored forces to impose boundaries be-

low the TF level. It is rarer still in division or higher operations, despite the use of boundaries, that a TF or BCT commander "owns the ground" to engage targets quickly, requiring coordination and clearance only within his organization.[7]

Division assets such as general support (GS) and general support reinforcing (GSR) artillery and radars, intelligence collectors and brigade reconnaissance troop (BRT) scouts are just a few of the clearance challenges. In most cases, positive clearance of fires is required. FM 6-20-40 defines positive clearance as requiring (1.) the best available method of target location; (2.) positive identification of a target as enemy; (3.) eyes on target, if at all possible; and (4.) clearances from appropriate external elements if the target is outside unit boundaries.[8]

Clearing fires with external elements is what takes time. If the TF has not used company boundaries and scouts have not provided accurate reports, positive clearance is required to clear a mission. In attempting to clear a mission, many times, FSOs at all levels have to go to the commander or executive officer (XO) to obtain clearance. Tactical operations center (TOC) staffs then spend valuable time trying to contact key leaders on the ground to clear a target.

At the BCT level, if the BRT, ground surveillance radars, combat observation lasing teams (COLTs) and other BCT or divisional assets are not tracked in detail, the process takes even longer. Add communications problems to the mix, and fires are delayed even longer. In a close contact fight where fires must be fast, accurate, flexible and overwhelming in the time taken to clear a target, we may have lost valuable combat power before indirect fires can have an effect.

Unfortunately, there are no training standards for the time and procedures the combined arms community uses to clear targets. Therefore, clearance takes…as long as it takes. (See Figure 1.)

As a combined arms community, we must insist on battle drills at all levels that enable rapid clearance similar to the Field Artillery counterfire standard. Time becomes a forcing function to streamline the clearance response. *Army Training and Evaluation Program (ARTEP) 6-115-Mission Training Plan (MTP) for the Cannon Battalion* sets a training standard of one minute, 30 seconds for counterfire—55 seconds for the observer and 35 seconds for the fire direction center (FDC) from acquisition until the mission is transmitted to

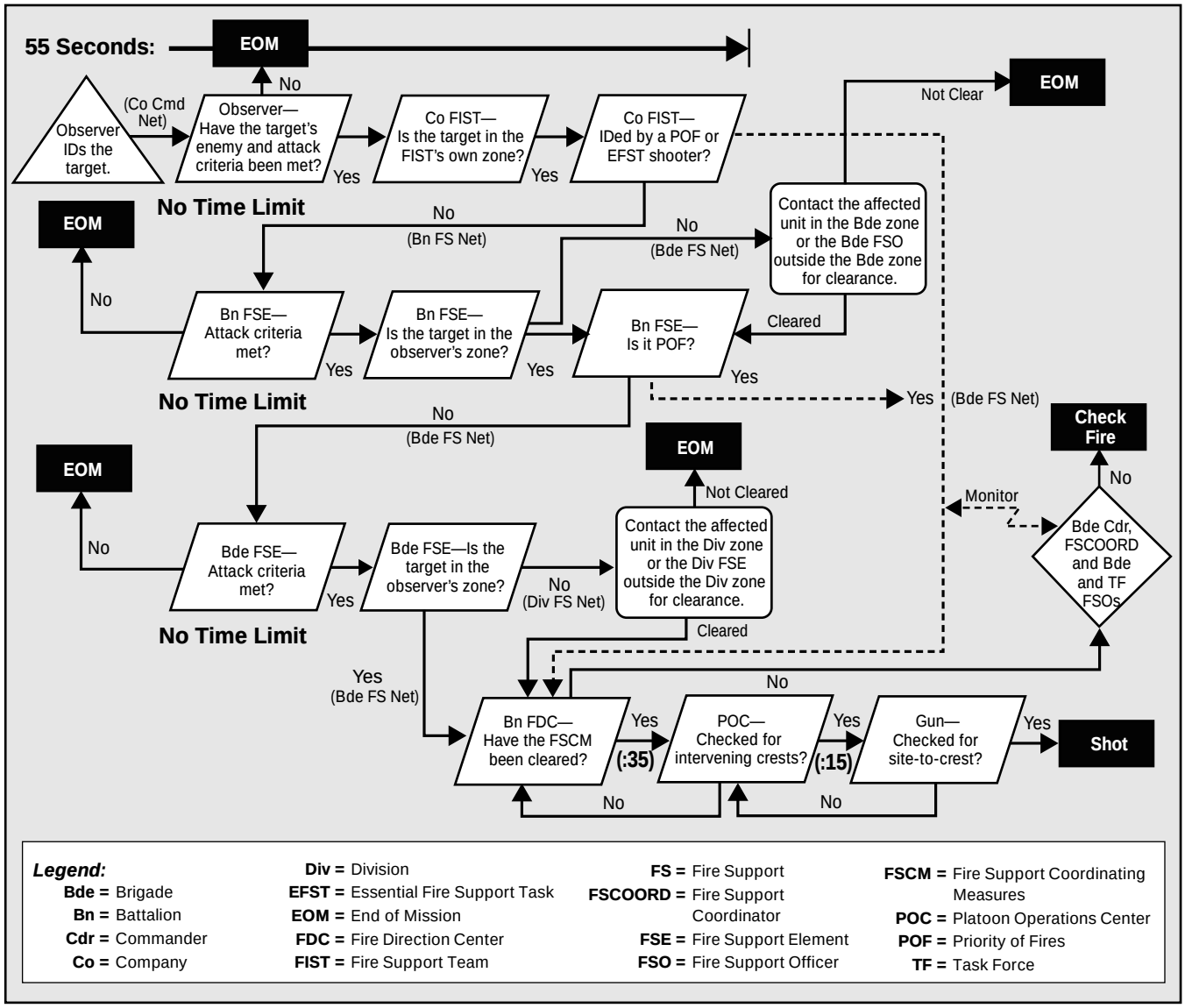

Figure 1: Current Clearance of Fire Battle Drill. How long does it take to clear fires on a target? It takes as long as it takes—no time standard.

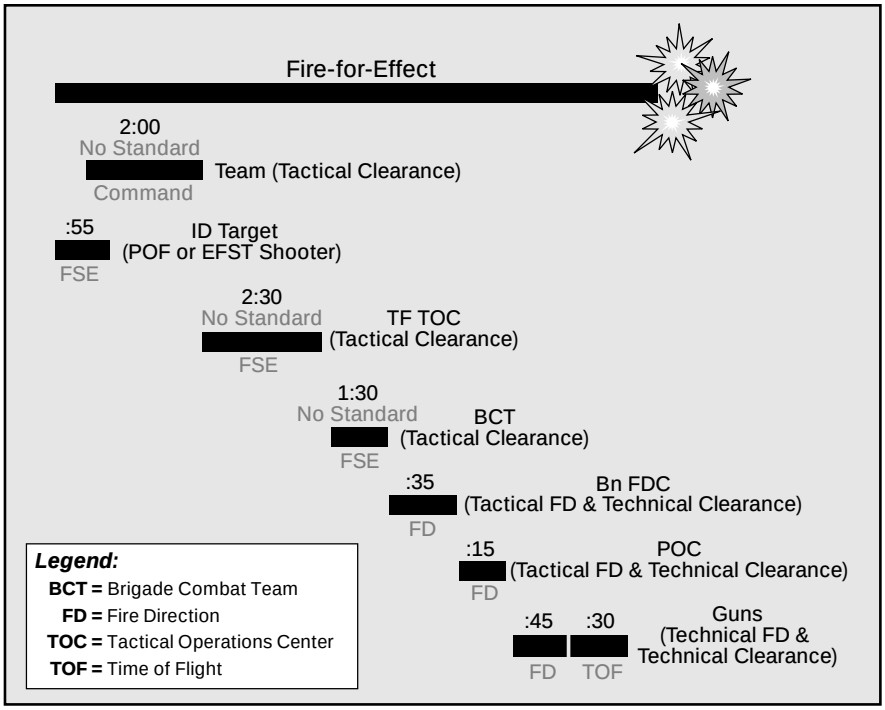

Figure 2: Today's Standard Call-for-Fire (CFF). On a *great* day, it is nine minutes from CFF to the first volley impacting. Today's CFFs tend to occur sequentially, have loosely defined standards for clearing targets and processing them tactically and have no battle drills by echelons with fixed responsibilities.

the delivery unit for target attack.[9] In fact, a streamlined counterfire drill used at the CMTC, held to a strict time standard, has resulted in a positive counterfire trend.

Again, in the same analysis of 10 CMTC rotations, friendly forces on the average lost only three to five vehicles per battle to OPFOR fires and "greater than 80 percent of enemy indirect missions are one-time events. The OPFOR [is] unwilling or unable to follow-up due to friendly counterfire."[10] This trend is the result of streamlining the clearance battle drill to meet a target exposure time.

For a force in contact where minutes can be measured in lost combat power for a maneuvering force, the same type of battle drill tied to time is just as critical. Link slow clearance to poor target location and the rounds are inevitably too late and nowhere near the target.

Often we approach mission processing sequentially (see Figure 2). The observer identifies a target, the fire support team (FIST) converts the target into a fire mission (99 percent of the time the mission is an FFE) and then mission clearance procedures begin. Often the battalion FDC does not get the fire mission until it is cleared at the TF and BCT levels.

Tracking several missions at the CMTC, it takes a minimum of two minutes to positively clear a target at the company-team level; two minutes, 30 seconds at the TF level (if the target is outside unit boundaries or if no company-team boundaries are used); and one minute, 30 seconds at the BCT level to deconflict BRT scouts and COLTs. Using the current standards for an FFE mission (ARTEP 6-115-MTP) and sequential clearance (as shown in Figure 2), the best time for any mission, sensor-to-shooter, is nine minutes. If the mission is off target, as is the trend, then the observer begins to adjust on to the target and the mission takes even longer.

Inevitably, fires are not effective in meeting the task and purpose required. Unfortunately, the blame is often laid entirely at the feet of the fire support community, not the combined arms community. One way of reversing this trend and increasing the accuracy of fires is to use a parallel process for simultaneously clearing and processing missions.

The parallel process is very simple in execution. Instead of conducting an FFE mission that has been sequentially cleared and processed as already described, the target is cleared as the observer initiates an adjust-fire mission on a target. (See Figure 3.) This process increases responsiveness, clears the mission as the firing unit processes it and adjusts the fire, the latter dramatically improving target attack accuracy.

As a unit makes contact and begins its maneuver, the observer (usually a maneuver shooter) initiates an adjust-fire mission on the team command net. As clearance procedures begin at the team level, the FIST verifies the target is the enemy, the observer is using the best method of target location and the observer has eyes on the target (the first three requirements for positive clearance). On the TF fire support communications net, the company FIST contacts the dedicated battery (or platoon) FDC and initiates the mission as cleared for adjustment while the FFE clearance progresses.

The TF fire support element (FSE) begins clearing the mission with the TF and external agencies (the fourth requirement for positive clearance) as the adjustment progresses. The mission is not cleared for the FFE phase until the process is complete.

Within two minutes, 10 seconds (assuming a 30-second time of flight) the initial round impacts and the observer adjusts the round. At some point less than three minutes from target identification, the TF FSE reports to the dedicated FDC that the mission is clear (a clearance standard of two minutes, 10 seconds is preferred, but not practicable). These three minutes are for simultaneous external clearance of the target at each level (team, TF and brigade) before the FFE phase is reached.

Once the TF FSE has determined the mission is clear, the dedicated battery fires for effect and rounds hit the target at approximately four minutes, 40 seconds from identification (assuming a 30-second time of flight and DPICM in the FFE phase of the mission). Accurate, responsive and, to the maximum extent possible, safe fires are on the target to protect the force in contact and ensure it is free to maneuver.

Using the parallel process for fire missions certainly creates a greater risk of fratricide. However, in a close contact fight where the environment is fluid and confused, what is the cost to the maneuver force of not providing responsive, accurate fires? In an interview with Lieutenant General (Retired) Harold Moore about his book *We Were Soldiers Once…and Young*, he was asked, "How close did you call in artillery?" His answer was—"You call it in

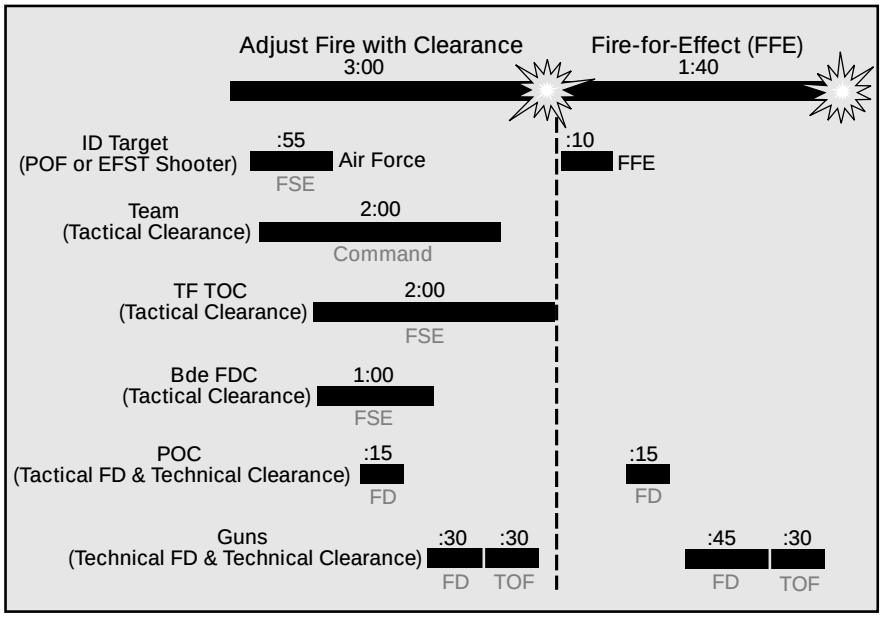

Figure 3: The Parallel Clearance of Fires Process Linked with a Dedicated Battery. Within three minutes, the target is cleared. The total time it takes to adjust fire and then fire-for-effect is 4:40—from call-for-fire to first volley impacting.

where the enemy is…30 yards or less if you have to. You may take some friendly casualties, but you'll take a helluva lot more from the enemy if you don't bring your fires in close enough to do some good."[11]

To provide close fires in support of forces in contact, we must accept a certain amount of fratricide risk; without providing those fires, the potential cost in lives and failure of the mission is too high. However, that does not mean that we cannot mitigate that risk.

If the risk is accepted, then the parallel clearance and fire mission processing helps mitigate the risk. The parallel process meets the first three of the four requirements for positive clearance before fires are adjusted onto the target. Risk is further mitigated by using high explosives (HEs) in the adjust-fire phase because of their smaller bursting widths: 155-mm is 50 meters and 105-mm is 30 meters. Also, because the observer adjusts the mission, accuracy increases.

The commander may further mitigate the risks by using more boundaries and other FSCMs. Although the maneuver commander must weigh flexibility for maneuver against a rigidly defined battlespace, he can mitigate risk by enforcing better reporting at all levels. However, outside of digitized units, absolute fidelity of the location of individual maneuver elements is extremely difficult once the unit is in contact.

At the same time, we cannot have a maneuver force being decimated in a direct firefight while staffs work through a vaguely defined clearance battle drill. The result of slow clearance and inaccurate fires are platoons and companies lost in contact while staffs attempt to ascertain the location of a lone scout team with whom they have lost communications.

The parallel process for clearing fires while adjusting on to a target linked with the dedicated battery trained to meet MTP standards for target attack ensures accurate fires within four minutes, 40 seconds or less after the call-for-fire is initiated.

The ability to provide fires in support of a force in contact is an area in which we can improve. EFSTs and the concept of supporting the brigade commander's decisive point has often left the TF in contact with little more than four mortar tubes to provide indirect fire. In an era of increasing ability to acquire and hit targets at longer ranges in a high-intensity environment where one well-positioned and unanticipated enemy tank or anti-tank system can slow and inflict terrible casualties on a maneuver force, the TF needs fast, accurate, flexible and overwhelming fires.

Generating effective fires in support of a force in contact is not solely a Field Artillery issue. It is a combined arms issue. Without the inclination of the BCT commander to decentralize at least some of his artillery to provide contact support to his main effort TF, there can be no dedicated battery. This means he may have to reduce the number of fire support tasks his DS battalion performs to shape the battlespace at the decisive point.

The combined arms community must be willing to establish and adhere to time standards and procedures for clearing fires. Without this willingness, fires will not be any more responsive and forces in contact will wait "as long as it takes" for TOCs to grind through the clearance process. The time that grind takes puts soldiers' lives at risk.

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Endnotes:

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2. Ibid, 3-02.
3. Lieutenant Colonel Robert R. Leonhard, "Classical Fire Support vs. Parallel Fires," *Army* (April 2001).
4. FM 6-20-40, 3-02.
5. "Field Artillery Azimuths," 2002 Senior Field Artillery Leaders Conference Panel Backbriefs, Fort Sill, Oklahoma, April 2002, 9-12.
6. "Training Insights," 1st Infantry Division, Wurzberg, Germany, January 2002.
7. FM 6-20-40, 3-109.
8. Ibid, 3-113.
9. *Army Training and Evaluation Plan (ARTEP) 6-115-Mission Training Plan(MTP) for the Field Artillery Cannon Battalion Command and Staff Section, Headquarters and Headquarters Battery, and Service Battery* (Washington, DC: Department of the Army, 1 April 2000), A-28.
10. "Training Insights."
11. Colonel Thomas G. Waller, "First Response to Three Responses to 'Is the FA Walking Away from the Close Fight,'" *Field Artillery* (January-February 2000), 3.